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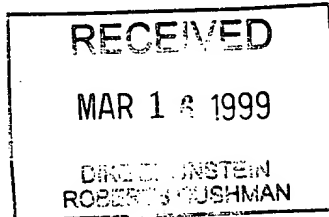
APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/813,781	03/07/97	WEIDANZ	J 46745

HM12/0312

PETER F. CORLESS, ESQ.
DIKE, BROWNSTEIN, ROBERTS & CUSHMAN, LLP
130 WATER STREET
BOSTON MA 02109

EXAMINER	
LUBET, M	
ART UNIT	PAPER NUMBER
1644	14

DATE MAILED: 03/12/99

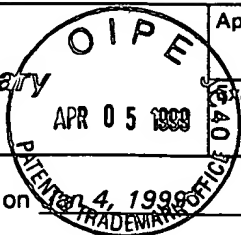


Please find below and/or attached an Office communication concerning this application or proceeding.

• **Commissioner of Patents and Trademarks**

DIKE, BRONSTEIN, ROBERTS & CUSHMAN
130 Water St. Boston, MA 02108
Date Rec'd 3/22/99 (given by PC 3/11)
Docketed For Apr. 12 - Aug. 12, 1999
By ✓
Approved _____

Office Action Summary

Application No.
08/813,781

Applicant(s)

Weidanz et al

Examiner

Lubet

Group Art Unit
1644☒ Responsive to communication(s) filed on APR 4, 1999☐ This action is FINAL.☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 1 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-4, 6-9, 13-15, and 18-68 is/are pending in the application.Of the above, claim(s) 20-59 and 68 is/are withdrawn from consideration.☐ Claim(s) _____ is/are allowed.☐ Claim(s) _____ is/are rejected.☐ Claim(s) _____ is/are objected to.☒ Claims 1-4, 6-9, 13-15, 18-20, and 60-67 are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.☐ The drawing(s) filed on _____ is/are objected to by the Examiner.☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.☐ The specification is objected to by the Examiner.☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.☐ received in Application No. (Series Code/Serial Number) _____.☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____☐ Interview Summary, PTO-413☐ Notice of Draftsperson's Patent Drawing Review, PTO-948☐ Notice of Informal Patent Application, PTO-152☒ See separate letter

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 1644

1. In Paper 8 mailed Feb. 27, 1998 a restriction requirement was made. In response to the restriction requirement, Applicant elected Group I. Examiner rejoined the invention of Group I to Group II. Original claims 1-20 pertain to the elected invention. In Paper 13, filed Jan 13, 1999, Applicant canceled claims 5, 10, 11, 12, 16 and 17, amended claims 1, 9 and 20 and added new claims 60-68. Claim 68 is drawn to a non-elected invention, a bacteriophage comprising the soluble fusion protein of claim 1. Therefore claim 1-4, 6-9, 13-15, 18-20 and 60-67 are drawn to the elected invention and are under examination.

2. Claim 1-4, 6-9, 13-15, 18-20 and 60-67 are drawn to a plurality of disclosed patentably distinct species comprising a single chain T cell receptor comprising $V\alpha$ and $V\beta$. TCR and a bacteriophage coat protein. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. For instance Applicant could elect a soluble fusion protein comprising a bacteriophage coat protein covalently linked to in sequence :
1) $V\alpha$ chain, 2) a peptide linker sequence, 3) a $V\beta$ chain linked to a C- β chain fragment and a bacteriophage gene VIII protein.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Art Unit: 1644

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

3. This application contains sequence disclosures that are encompassed by the definitions for nucleotide and/or amino acid sequences set forth in 37 CFR 1.821(a)(1) and (a)(2). However, this application fails to comply with the requirements of 37 CFR 1.821 through 1.825. for the reason(s) set forth below in the attached raw sequence listing error summary. Applicant stated that a copy of defective CRF report was not included in the office action mailed June 23, 1998. A copy of the defective CRF report is attached.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martha Lubet whose telephone number is (703) 305-7148. The examiner can normally be reached on Monday through Friday from 8:15 AM to 4:45 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan, can be reached at (703) 305-3973. The FAX number for this group is (703) 305-

Art Unit: 1644

3014 or 308-4242. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Martha Lubet

TC
THOMAS M. CURNISCHAM
PRIMARY EXAMINER
GROUP 1800

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING
NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821.825 for the following reason(s):

- ☐ 1. This application clearly fails to comply with the requirements of 37 CFR - 1.825. Applicant's attention is directed to these regulations, published at 1114 May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 CFR 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CFR 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e).
- ☐ 7.

Other: _____

Applicant must provide:

- ☒ An ~~initial~~ or substitute computer readable form (CRF) copy of the "Sequence Listing"
- ☐ An ~~initial~~ or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification
- ☐ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e), 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d)

For questions regarding compliance with these requirements, please contact:

For Rules Interpretation, call (703) 308-1123
For CRF submission help, call (703) 308-4212
For PatentIn software help, call (703) 557-0400

Please return a copy of this notice with your response.



RAW SEQUENCE LISTING
PATENT APPLICATION US/08/813,781

TEAM 8

DATE: 04/18/97
TIME: 15:53:16

INPUT SET: S17080.raw



This Raw Listing contains the General Information Section and those Sequences containing ERRORS.

Does Not Comply
Corrected Diskette Needed

SEQUENCE LISTING

(1) General Information

GENERAL INFORMATION: all listings are in uppercase letters

(i) APPLICANT: Weidanz, Jon A.
Card, Kimberlyn F.
Wong, Hing C.

(ii) TITLE OF THE INVENTION: FUSION PROTEINS COMPRISING BACTERIOPHAGE COAT PROTEIN

(iii) NUMBER OF SEQUENCES: 130

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: DIKE, BRONSTEIN, ROBERTS & CUSHMAN, LLP
(B) STREET: 130 Water Street
(C) CITY: Boston
(D) STATE: MA
(E) COUNTRY: USA
(F) ZIP: 02109

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Diskette
(B) COMPUTER: IBM Compatible
(C) OPERATING SYSTEM: DOS
(D) SOFTWARE: FastSEQ Version 1.5

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:
(B) FILING DATE:
(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER:
(B) FILING DATE:

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: RESNICK, DAVID S
(B) REGISTRATION NUMBER: 34,235
(C) REFERENCE/DOCKET NUMBER: 46745

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: 617 523 3400

INPUT SET: S17080.raw

46
47
48
49(B) TELEFAX: 617 523 6443
TELEX:

ERRORED SEQUENCES FOLLOW:

828 (2) INFORMATION FOR SEQ ID NO:44:
829
830 (i) SEQUENCE CHARACTERISTICS:
--> 831 (A) LENGTH: 35 base pairs 28 shown
832 (B) TYPE: nucleic acid
833 (C) STRANDEDNESS: single
834 (D) TOPOLOGY: linear
835
836 (ii) MOLECULE TYPE: cDNA
837 (iii) HYPOTHETICAL: NO
838 (iv) ANTI-SENSE: NO
839 (v) FRAGMENT TYPE:
840 (vi) ORIGINAL SOURCE:
841
842 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:
843
--> 844 CCGGCTCATC AGTGATGATG GTGAGCG G
845

(35) 28

1868 (2) INFORMATION FOR SEQ ID NO:101:
1869
1870 (i) SEQUENCE CHARACTERISTICS:
--> 1871 (A) LENGTH: 30 base pairs 29 shown
1872 (B) TYPE: nucleic acid
1873 (C) STRANDEDNESS: single
1874 (D) TOPOLOGY: linear
1875
1876 (ii) MOLECULE TYPE: cDNA
1877 (iii) HYPOTHETICAL: NO
1878 (iv) ANTI-SENSE: NO
1879 (v) FRAGMENT TYPE:
1880 (vi) ORIGINAL SOURCE:
1881
1882 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:101:
1883
--> 1884 GCCGGCCATG GCCRGTCCTG TCRTCTCTC
1885 - (your 99)

(30) 29

2192 (2) INFORMATION FOR SEQ ID NO:119:
2193
2194 (i) SEQUENCE CHARACTERISTICS:
--> 2195 (A) LENGTH: 33 base pairs 32 shown
2196 (B) TYPE: nucleic acid

See next page

RAW SEQUENCE LISTING
PATENT APPLICATION US/08/813,781DATE: 04/18/97
TIME: 15:53:22

INPUT SET: S17080.raw

2197 (C) STRANDEDNESS: single
2198 (D) TOPOLOGY: linear
2199
2200 (ii) MOLECULE TYPE: cDNA
2201 (iii) HYPOTHETICAL: NO
2202 (iv) ANTI-SENSE: NO
2203 (v) FRAGMENT TYPE:
2204 (vi) ORIGINAL SOURCE:
2205
2206 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:119:
2207
--> 2208 GGAGGCGGGCG GTTCTCAGAG AGTGACTCA GCC
2209

group of 9

33

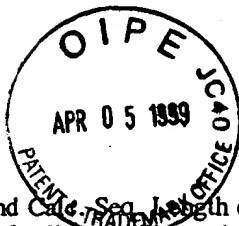
32

SEQUENCE VERIFICATION REPORT
PATENT APPLICATION US/08/813,781

DATE: 04/18/97

TIME: 15:53:33

INPUT SET: S17080.raw



Line	Error	Original Text
831	Entered (35) and Calc. Seq. Length (28) differ	(A) LENGTH: 35 base pairs
844	# of Sequences for line conflicts w/ running total	CCGGGTCATC AGTGATGATG GTGAGCG G
1871	Entered (30) and Calc. Seq. Length (29) differ	(A) LENGTH: 30 base pairs
1884	# of Sequences for line conflicts w/ running total	GCCGGCCATG GCCRG TGCTG TCRTCTCTC
2195	Entered (33) and Calc. Seq. Length (32) differ	(A) LENGTH: 33 base pairs
2208	# of Sequences for line conflicts w/ running total	GGAGGCGGCG GTTCTCAGAG AGTGACTCA GCC

Practitioner's Docket No. 46745 (1008)

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: J. A. Weidanz, et al.

Serial No.: 08/813,781 Group No.: 1644
Filed: 03/07/97 Examiner: M. Lubet
For: FUSION PROTEINS COMPRISING BACTERIOPHAGE COAT
PROTEIN AND A SINGLE-CHAIN T CELL RECEPTOR

Box Sequence
Assistant Commissioner for Patents
Washington, D.C. 20231

SUBMISSION OF "SEQUENCE LISTING," COMPUTER READABLE COPY, AND/OR
AMENDMENT PERTAINING THERETO FOR BIOTECHNOLOGY INVENTION
CONTAINING NUCLEOTIDE AND/OR AMINO ACID SEQUENCE

(check and complete this item, if applicable)

1. ☒ This replies to the Office Letter dated March 12, 1999

NOTE: If these papers are filed before the office letter issues, adequate identification of the original papers should be made, e.g., in addition to the name of the inventor and title of invention, the filing date based on the "Express Mail" procedure, the serial number from the return post card or the attorney's docket number added.

☒ A copy of the Office Letter is enclosed.

CERTIFICATION UNDER 37 CFR 1.8(a) and 1.10*

(When using Express Mail, the Express Mail label number is mandatory;
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

☒ deposited with the United States Postal Service in an envelope addressed to the Assistant commissioner for Patents, Washington, D.C. 20231

37 CFR 1.8 (a)

37 CFR 1.10*

☒ with sufficient postage as first class mail. ☐ as "Express Mail Post Office to Addressee"

Mailing Label No. _____ (mandatory)

TRANSMISSION

☐ transmitted by facsimile to the Patent and Trademark Office.

Date: April 2, 1999

Signature

Patricia A. Barnes

(type or print name of person certifying)

*WARNING: Each paper or fee filed by Express Mail must have the number of the "Express Mail" mailing label placed thereon prior to mailing. 37 C. F. R. 1.10(b). "Since the filing of correspondence under §1.10 without the Express Mail mailing label thereon is an oversight that can be avoided by the exercise of reasonable care, requests for waiver of this requirement will **not** be granted on petition. "Notice of Oct.24, 1996, 60 Fed. Reg. 56,439, at 56,442.



IDENTIFICATION OF DECLARANT

2. I, Robert L. Buchanan
(type or print name of declarant signing below)

state the following:

ITEMS BEING SUBMITTED

3. Submitted herewith is/are

(check each item as applicable)

- A. ☒ "Sequence Listing(s)" for the nucleotide and/or amino acid sequence(s) in this application. Each "Sequence Listing" is assigned a separate identifier as required in 37 C.F.R. § 1.821(c) and 37 C.F.R. §§ 1.822 and 1.823.
- B. ☒ An amendment to the description and/or claims, wherein reference is made to the sequence by use of the assigned identifier, as required in 37 C.F.R. § 1.821(d).
- C. ☒ A copy of each "Sequence Listing" submitted for this application in computer readable form, in accordance with the requirements of 37 C.F.R. §§ 1.821(e) and 1.824.
- D. ☐ Please transfer to this application, in accordance with 37 C.F.R. § 1.821(e), the computer readable copy(ies) from applicant's other application identified as follows:

In re application of:

Serial No.:

/

Group No.:

Filed:

Examiner:

For:

The Computer readable form(s) of applicant's other application corresponds to the "Sequence Identifier(s)" of the application as follows:

Computer Readable Form

"Sequence Identifier"

(other application)

(this application)

(Submission--Nucleotide and/or Amino Acid Sequence [9-37]--page 2 of 6)

NOTE: "If the computer readable form of a new application is to be identical with the computer readable form of another application of the applicant on file in the Office, reference maybe made to the other application and computer readable form in lieu of flung a duplicate computer readable form in the new application. The new application shall be accompanied by a letter making such reference to the other application and computer readable form, both of which shall be completely identified" 37 C.F.R. 1.821(e)

- E. ☒ A statement that the content of each "Sequence Listing" submitted and each computer readable copy are the same, as required in 37 C.F.R. § 1.821(g).
- ☐ Because the statement is not made by a person registered to practice before the Office, the Statement is verified as required in 37 C.F.R. § 1.821(b).
- F. ☒ Because this submission is made in fulfilling the requirement under 37C.F.R. § 1.821(g), a statement that the submission includes no new matter.
- ☐ Because the statement is not made by a person registered to practice before the Office, the statement is verified, as required in 37 C.F.R. § 1.821(g).

STATEMENT THAT "SEQUENCE LISTING" AND COMPUTER READABLE COPY ARE THE SAME AND/OR THAT PAPERS SUBMITTED INCLUDES NO NEW MATTER

4. I hereby state:
(complete applicable item A and/or B)
- A. ☒ Each computer readable form submitted in this application, including those forms requested to be transferred from applicant's other application, is the same as the "Sequence Listing" to which it is indicated to relate.
- B. ☒ All papers accompanying this submission, or for which a request for transfer from applicants' other application, introduce no new matter.

VERIFICATION

5. **NOTE:** "Such a statement must be verified statement if made by a person not registered to practice before the Office." 37 C.F.R. § 1.821(f) and (g).
- ☒ I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true: and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

STATUS

6. Applicant is
- ☐ a small entity. A verified statement:
☐ is attached.
☐ was already filed.
☐ will follow.
- ☒ other than a small entity.

EXTENSION OF TERM

7.

NOTE: "Extension of Time in Patent Cases (Supplement Amendments)-If a timely and complete response has been filed after a Non-Final Office Action, an extension of time is not required to permit filing and/or entry of an additional amendment after expiration of the shortened statutory period.

If a timely response has been filed after a Final Office Action, an extension of time is required to permit filing and/or entry of a Notice of Appeal or filing and/or entry of an additional amendment after expiration of the shortened statutory period unless the timely-filed response placed the application in condition for allowance. Of course, if a Notice of Appeal has been filed within the shortened statutory period, the period has ceased to run. Notice of Dec. 10, 1985 (1061 O.G. 34-35).

NOTE: See 37 C.F.R. 1.645 for extensions of time in interference proceedings and 37 C.F.R. 1.550(c) for extensions of time in reexamination proceedings.

8. The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

(complete (a) or (b) as applicable)

- (a) ☐ Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)-(d)) for the total number of months checked below:

<u>Extension (months)</u>	<u>Fee for other than small entity</u>	<u>Fee for small entity</u>
<input type="checkbox"/> one month	\$ 110.00	\$ 55.00
<input type="checkbox"/> two months	\$ 400.00	\$ 200.00
<input type="checkbox"/> three months	\$ 950.00	\$ 475.00
<input type="checkbox"/> four months	\$ 1,510.00	\$ 755.00

Fee \$ _____

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

- ☐ An extension for _____ months has already been secured. The fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ _____

OR

- (b) ☒ Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition for extension of time.

FEE PAYMENT

9. ☐ Attached is a check in the sum of \$ _____
☐ Charge Account No. _____ the sum of \$ _____
A duplicate of this transmittal is attached.

(Submission--Nucleotide and/or Amino Acid Sequence [9-37]--page 4 of 6)


FEE DEFICIENCY

10.

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in returning the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G. 31-33.

11. [X] If any additional extension and/or fee is required, charge
Account No. 04-1105

SIGNATURE(s)

Robert L. Buchanan
(type or print name of person signing declaration)

Signature

Dike, Bronstein, Roberts & Cushman, LLP
130 Water Street
Boston, MA 02109

P.O. Address of Signatory

(if applicable)
Telephone No. (617) 523-3400
Reg. No. 40,927
Customer No.: 21874

[] Inventor(s)
[] Assignee of complete interest
[] Person authorized to sign on behalf of assignee
[X] Practitioner of record
[] Filed under Rule 34(a)
[] Registration No. _____
[] Other _____
(specify identity of declarant)

(complete the following, if applicable)

(type name of assignee)

Address of assignee

Title of person authorized to sign on behalf of assignee

A "CERTIFICATE UNDER 37 C.F.R. 3.73(b)" is attached.

Assignment recorded In PTO on _____

Reel _____ Frame _____

SIGNATURE OF PRACTITIONER

Reg. No.:

(type or print name of practitioner)

Tel. No.: ()

(P.O. Address)

Customer No.:
